

## **Understanding Student Attitudes about Distance Education: The Importance of Excitement and Fear**

Esther Smidt, Jennifer Bunk, Rui Li, Ashley McAndrew, and Matthew Florence

## Abstract

This quantitative study investigated student attitudes toward distance education at a midsized, mid-Atlantic state university in the United States. The research question was: Do feelings of excitement and fear moderate and/or mediate the relationship between online learning experiences and student opinions about the current state of online education, namely that institutions were pushing too much instruction online? Data was collected from students via an online survey. Findings suggested: (a) students with online experience who were fearful of this learning mode were the most likely to report that their institutions were pushing too much online learning, (b) regardless of online learning experience, students who were excited about this learning mode were less likely to think that their institutions were pushing too much online learning.

Keywords: student attitudes; distance education; excitement; fear

## Introduction

Distance education has grown exponentially in the last few decades. Between fall 2012 and 2013, online student enrollment grew by 5.2%, growing at a higher rate than overall student enrollment (Lokken & Mullins, 2014). In view of this growth, it is important to investigate the attitudes, perceptions, experiences, and learning outcomes of students, to see how they can inform the implementation of distance education. This study sought to understand student attitudes by looking at the psychological processes, specifically the emotions of excitement and fear and their influence on students' online learning experience. As such, this study aimed to contribute theoretically by adding to the existing body of knowledge, particularly in the area of emotion and online learning, and practically, by considering the influence of excitement and fear on students' online learning experiences.

## Literature Review

### Students' Online Course Experiences

As indicated above, the collegiate mode of learning is rapidly changing, and more and more students are taking online courses during their undergraduate and graduate careers. The online course experiences and face-to-face experiences of students vary from institution to institution. Research suggests that student performance in online courses is at least as good as, if not better than those in face-to-face courses (Lapsley, Kulik, Moody, & Arbaugh, 2008; Reisetter, Lapointe, & Korcuska, 2007; Sitzmann, Kraiger, Stewart, & Wisher, 2006; Warren & Holloman, 2005). In a study conducted by Ernst (2008), a large percentage of respondents, 85%, were at ease in an online learning environment. Similarly, students in online and traditional classes did not differ in terms of their attitudes about and feelings of self-efficacy toward technology. Students in both types of courses had relatively positive attitudes regarding technology and felt moderately self-efficacious about using technology (Stevens & Switzer, 2006).

### Factors that Adversely Impact Student Emotions

An online course experience can negatively impact a student's emotions about the course for a variety of reasons. Inexperience creates the biggest obstacle. Understanding Internet culture is an important factor when it comes to finding ease in utilizing the Internet in an online course. Furthermore, lack of experience leads to lack of confidence, which results in a fear of using certain functions on the part of students (Carswell, Thomas, Patre, Price, & Richards, 2000). Other sources of anxiety for most students include lack of experience participating in online courses, not being accustomed to the electronic environment, and not possessing control over the systems processes (O'Regan, 2003).

The second factor that negatively impacts a student's distance education experience is the relationship with the instructor in the online environment. In online courses, students may experience confusion if instructor feedback is not clear or timely, which leads to anxiety (Hara & Kling, 1999). For instance, if instructors fail to reply to questions in a timely manner, this leads to an increase in anxiety, especially when there is an issue with an assignment close to the assignment's deadline (O'Regan, 2003). These experiences could ultimately result in students dropping out of online courses (Ivankova & Stick, 2007).

The third factor that is found to create anxiety and dissatisfaction in the online classroom is the mode of communication. Many students reported that they felt lost in the multi-threaded discussion environment. They became confused and frustrated, having difficulty determining

“who” was talking to “whom” about “what.” Generally, students tended to “withdraw” or “just observe.” These reactions would create a negative impact on online communications, such as creating “discontinued” feelings and interfered with students’ ability to think and reflect on the messages (Tu & McIsaac, 2002).

### **Factors that Positively Impact Student Emotions**

On the other hand, positive experiences in the distance education setting can create a welcome environment, which can lead to higher levels of satisfaction regarding their course. The biggest factor contributing towards a positive online learning experience has to do with the instructor. An instructor has a definite role in making the online environment successful (Ali & Ahmad, 2011). Interaction is different in this environment (Walker & Hackman, 1991), with its emphasis on the instructor’s role as the mediator between student and materials (Beaudoin, 1990) or between student and technology (Hillman, Willis, & Gunawardena, 1994). Therefore, the instructor must be cognizant of the increased diversity of learners, and then accordingly determine test formats, measurement practices, and assessment strategies (Banerjee & Brinckerhoff, 2002). Doing so may persuade and motivate students to accept the e-learning environment (Selim, 2005).

The instructor must also be available to the student, for example, by quickly replying to questions through email. Even if the responses are not solutions, showing that the problem is being worked on is helpful (Carswell, et. al., 2000). According to Inman, Kerwin, & Mayes (as cited in Ali & Ahmad, 2011), students expect three things from an instructor in the distance learning environment: helpful materials for interacting with the distance learning medium, some on-campus sessions, and availability in the time of need. In online learning environments, obtaining student feedback about needs and preferences is crucial for the successful design and implementation of this environment (Sahin, 2007). E-learning environments demand a transition of the roles of students and instructor. The instructor’s role is to become a facilitator who stimulates, guides, and challenges his/her students by providing students with freedom and responsibility, rather than that of a lecturer focusing on the delivery of instruction (Huynh, 2005). Learner satisfaction is felt when there is a perceived learner-instructor interaction taking place in the virtual classroom (Abdous, 2010).

Another factor that contributes towards the positive emotions of online learners is tailoring instruction to students’ learning styles. Findings suggest that online education can be a superior mode of instruction if it is targeted to learners with specific learning styles (e.g., visual and read/write learning styles) and with timely, helpful instructor feedback of various types. Although cognitive and diagnostic feedbacks are important factors that improve perceived learning outcomes, metacognitive feedback can induce students to become self-regulated learners (Eom, Ashill, & Wen, 2006).

Yet another aspect that facilitates a positive emotional experience by online learners is technological support and training. There is a need to educate students on technologies and other tools used in order to minimize communication breakdown. Distance education students must understand how Internet connections work in order to avoid issues with bandwidth, dropped connections, and other factors that impede communication (McDyre, McAndrew, & Smidt, 2015). Adequate technical training in student success and learning is important (Holder, 2007); however, not all Internet-delivered courses assess students’ computer skills prior to enrollment or provide technology and computer skill training during the course. Many university instructors assume traditional college students are “computer literate” and “technology savvy.” However, recent research has appeared questioning the computer skills

and technology knowledge of K-16 students (Koroghanian & Brinkerhoff, 2007). A task analysis of each Internet-delivered course should be undertaken to determine the technical skills needed in the course. These skills should be specified, and tutorials, handouts or self-study guides concerning the technical skills needed should be provided to students prior to the start of the course (Koroghanian & Brinkerhoff, 2007). Institutions offering Internet-delivered courses through course management systems such as WebCT, Desire2Learn, or Blackboard should provide scaffolds addressing shortcomings in the Help and other documentation incorporated into these systems based on the frequency of questions posed by students at those institutions (Koroghanian & Brinkerhoff, 2007).

### **Excitement and Fear**

Following from the research above, there is reason to believe that excitement and fear are relevant emotions when considering how experience with online courses relates to student reactions to online learning. For example, lack of experience with Internet culture can be associated with decreased confidence and increased fear of technology (Carswell et al., 2000; O'Reagan, 2003). In addition, experience with online courses can result in fear when students get confused about feedback (Hara & Kling, 1999) or uneasy about the multi-threaded nature of online discussion (Tu & McIsaac, 2002). Also, several research studies cited above indicated that when instructors are responsive, providing timely feedback and tech support, students can respond positively and with excitement (e.g., Ali & Ahmad, 2001; Koroghanian & Brinkerhoff, 2007).

There are also theoretical reasons to explore excitement and fear. From a theoretical standpoint, the study of discrete emotions dates back to mid-1980. Several theorists have categorized emotions and linked them with core cognitive processes. (See Roseman & Smith, 2001 for an overview such approaches.) Smith and Lazarus (Lazarus, 1991; 2001; Smith & Lazarus, 1990), for example, define fear as a core negative emotion that indicates an inability to cope emotionally with a stimulus. Izard (2013) defines excitement as a fundamental human emotion that is characterized by interest in what is new or possible. Thus, by investigating these two core emotions, one negative and one positive, we can further understand the cognition associated with them and ultimately get a glimpse into why students may be reacting the way they are.

### **Institutional Pressure for Online Courses**

There has been some research focusing on the institutional pressure brought to bear on faculty to teach online (Baran, Correia, & Thompson, 2011; Kang, 2012; Redmond, 2011). Grant (2004), for example, investigated factors that contributed to teacher education faculty's decision to pursue professional development in distance education technologies. Factors mentioned by Grant included extrinsic factors, namely external pressures from department and university administration for faculty to teach online. It should be noted, however, that the pressure was "moderate (but not overwhelming)" (p. 335), which contrasted with Lesht & Windes' (2011) finding that "some felt excessive pressure" to teach online. Meanwhile, Bower (2001) stated that "[m]ost faculty ... have not responded as quickly and enthusiastically as administrators would like" (para. 2). Furthermore, while Betts (1998) found that 25% of surveyed faculty experienced institutional pressure to teach online, Vernon, Vakalahi, Pierce, Pittman-Munke, and Adkins (2009) discovered that nearly 67% of social work faculty experienced the same pressure.

In contrast, in spite of anecdotal data suggesting that students experience a similar pressure to take online courses, for example, when there are no seats left in their preferred face-to-face

sections (Filimban, 2008), there has been a dearth of research focusing on students being forced to take online courses.

In view of this, our research question follows: Do feelings of excitement and fear moderate and/or mediate the relationship between online learning experiences and student opinions about the current state of online education, namely that institutions are pushing too much instruction online?

## **Method**

### **Participants**

Participants were 16,000 part- and full-time students from a mid-sized public university in the Mid-Atlantic region of the US who were invited via email to participate in an online survey on distance learning attitudes. Participation in the study was voluntary and participants were free to withdraw from the study at any time without penalty. A total of 1,453 students responded, yielding a 9.1% response rate. Data for 53 of the participants was discarded due to failure to complete at least half of the survey (final N = 1400). Participants consisted of 20% males and 80% females. 85% of the students who completed the survey reported their status as full-time and 67% of students in the sample completed 91 or more credits. 12% of respondents were graduate students and 88% were undergraduates. The breakdown of participants by the college of their major was as follows: 26.5% from the College of Arts and Science, 24.2% from the College of Business and Public Affairs, 18% from the College of Education, 25.3% from the College of Health Sciences and 2.5% from the College of Visual and Performing Arts and 3.6% undeclared. The mean age of the respondents was 23.06 (SD = 6.9) with a range of 17-67 years. The ethnic breakdown of the survey respondents was as follows: 3.4% Asian or Pacific Islander, 8.3% Black, African or African American, 3.4% Hispanic, 82.8% White or European and 2.1% Other.

## **Measures**

### **Demographic Variables**

The following variables were used: gender (0 = male; 1 = female), part-time/full-time status (0 = part-time; 1 = full-time), number of credits completed, and age (in years).

### **Online Course Experience**

Participants were asked if they had taken any of the following types of courses during the most recent academic year: face-to-face, hybrid/blended, and online. Students who selected “online” were coded as “1” (having online course experience) and students who did not choose “online” were coded as “0” (not having online course experience). 22% of participants reported taking an online course during the most recent academic year.

### **Excitement/Fear**

The survey included the prompt: “Do the following developments fill you more with excitement or with fear?” Response options included “more fear than excitement” or “more excitement than fear” and the responses were coded such that a higher score indicated more excitement than fear. The item we used in our analyses was “the growth of online education.” 50% of respondents endorsed “more fear than excitement” and 50% endorsed “more excitement than fear.”

## Outcome

The survey included the prompt “What are your opinions about the current state of online education?” and the following item was used in analyses as our outcome: “[my institution] is pushing too much instruction online.” The item was rated on a 5-point Likert scale with *Strongly Disagree* (1) and *Strongly Agree* (5) as anchors and 16.7% of respondents endorsed agree/strongly agree, 30.4% endorsed neutral, and 52.8% endorsed disagree/strongly disagree.

## Results

### Correlation Analyses

To explore our research question, “Do feelings of excitement and fear moderate and/or mediate the relationship between online learning experience and student opinions about the current state of online education, namely that institutions are pushing too much instruction online?” we first ran a set of preliminary correlations which are reported in Table 1.

Table 1. Correlations among all study variables

Measure	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7
1 Part/Full-Time	.852	.355	--						
2 Number of credits	2.90	1.44	-.008	--					
3 Age	23.06	6.95	-.502*	.171*	--				
4 Gender	.798	.402	-.048	-.001	-.015	--			
5 Online course experience	.220	.413	-.181*	.111*	.197*	.007	--		
6 Excitement/fear	1.500	.500	-.101*	.043	.107*	-.011	.174**	--	
7 My institution is pushing too much instruction online	2.526	1.06	.042	-.034	-.007	-.056*	.092*	.364*	--

\*  $p < .05$ . \*\*  $p < .01$ .

Pairwise N= 1292-1400

An inspection of the correlation table indicated that the following variables were significantly correlated with the extent to which students thought their institution was pushing too much instruction online: gender ( $r = -.056$ ;  $p < .05$ ), online course experience ( $r = -.092$ ;  $p < .001$ ) and excitement/fear ( $r = -.364$ ;  $p < .001$ ).

## Moderation Analyses

Given that the preliminary correlation analyses revealed that gender, online course experience, and excitement/fear were all predictive of our outcome, we ran an exploratory moderation analyses to test for possible interactions among these three variables. Multiple regression analyses were performed using the method suggested by Baron and Kenny (1986). The following control variables were entered in the first step of the regression: part/full time, number of credits, and age. Next, the main effect variables (gender, online course experience, and excitement/fear) were added in step 2 of the regression. All two-way interaction terms were entered in step 3 and finally the three-way interaction (gender X experience X excitement/fear) was added in the fourth step. The results can be viewed in Table 2.

Table 2. Moderation Analysis

Predictors	Outcome: My institution is pushing too much instruction online		
	$\beta$	R <sup>2</sup>	$\Delta R^2$
<b>Step 1</b>			
Part/Full Time	.033		
# Credits	-.002		
Age	.057		
		.004	.004
<b>Step 2</b>			
Gender	-.003		
Online Teaching Experience	.219*		
Excitement/Fear	-.275***		
		.145	.141***
<b>Step 3</b>			
Gender X Online Teaching Experience	-.090		
Gender X Excitement/Fear	.081		
Online Teaching Experience X Excitement/Fear	-.339***		
		.155	.010**
<b>Step 4</b>			
Gender X Online Teaching Experience X Excitement/Fear	--		
		.155	.000

*Note.* Standardized regression coefficients from the best-fitting model are shown.

\* p < .05. \*\* p < .01. \*\*\* p < .001.

Listwise N = 1234

A significant change in R<sup>2</sup> at the third step (after adding the two-way interactions; ( $\Delta R^2 = .01$ , p < .01)) indicated that, as a group, the two-way interactions explained significant variance in outcome over and above the effects of the control and main effect variables. Inspection of the

standardized regression coefficients revealed that the two-way interaction between experience and excitement/fear ( $\beta = -.339$ ,  $p < .001$ ) was significant in predicting our outcome. The other two two-way interactions were not significant. This significant interaction is illustrated in Figure 1. As indicated by the figure, excitement/fear and online course experience interacted to predict the extent to which respondents felt that their institution was pushing too much online instruction. The relationship between experience and the outcome was positive for those who were fearful but negative for those who were excited. Those students who were the most likely to believe that their institution was pushing too much instruction online were those who had online course experience and were fearful about the growth of online education.

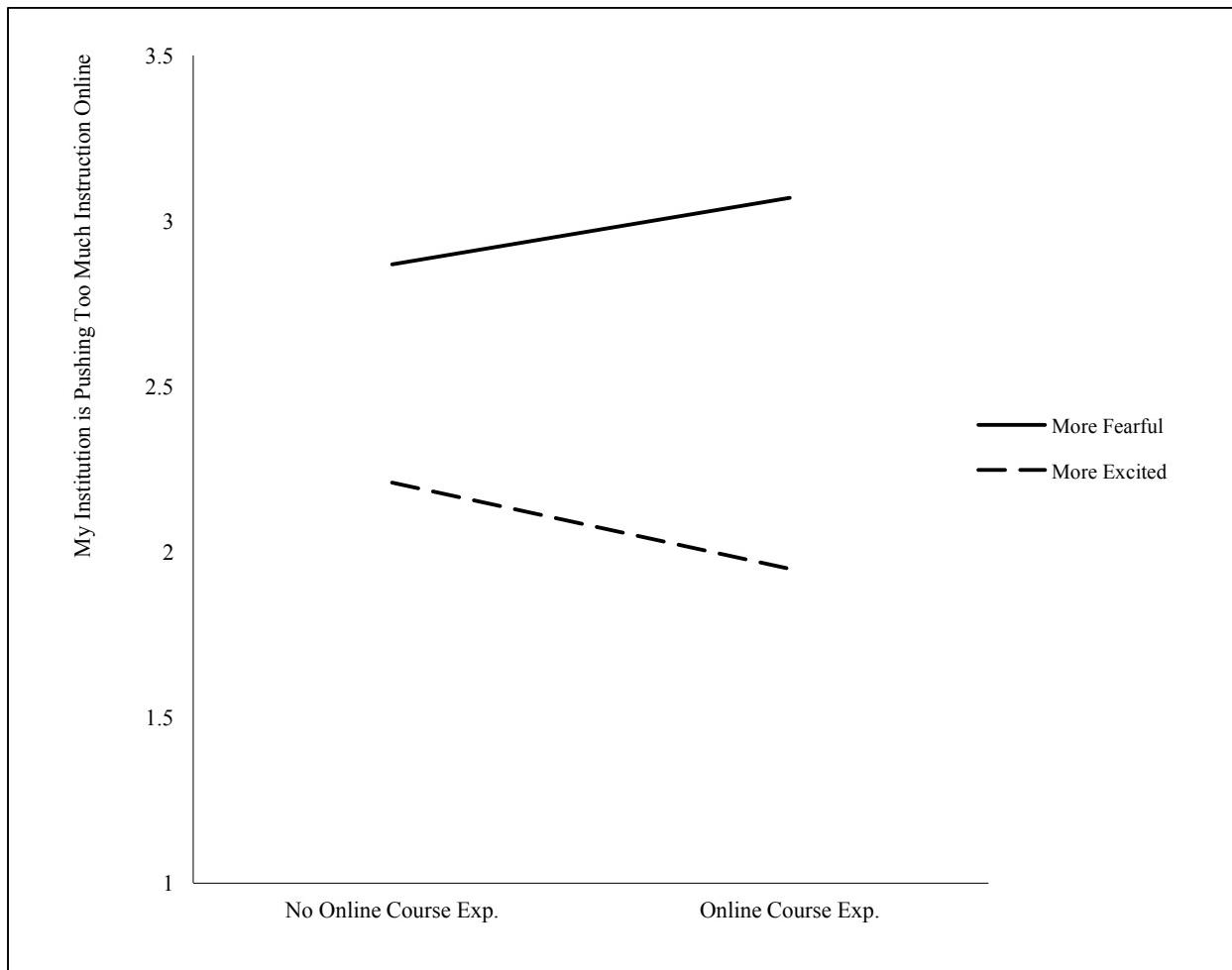


Figure 1. Excitement/fear and online course experience interaction to predict the extent to which respondents felt that their institution was pushing too much online instruction

### Mediation Analyses

Given the strong correlation between fear/excitement and our outcome, and in an attempt to demonstrate the importance of fear/excitement over and above online course experience, we also tested whether feelings of excitement or fear mediated the relationship between online course experience and the extent to which students believed that their institution was pushing too much instruction online. Multiple regression analyses were conducted using the method suggested by Baron and Kenny (1986). The following variables were used as controls: gender, part/full time, number of credits, and age. The first step was to establish a connection between our predictor and outcome variable. In this instance our predictor was online course experience. We thus regressed our outcome onto online course experience and online course experience

was significant ( $\beta = -.082$ ;  $p < .01$ ). With the predictor showing a significant relationship, we proceeded to step 2 which consisted of showing the relationship between the predictor (online course experience) and the mediator (excitement/fear). For this step the mediator (excitement/fear) was regressed onto the predictor (online course experience) and it was significant ( $\beta = .158$ ;  $p < .001$ ). With the relationship between predictor and mediator established, the final step was to conduct a multiple regression with both online course experience and excitement/fear as predictors. To establish mediation, it was necessary to show that excitement/fear was significant in predicting our outcome and that once excitement/fear was added to the regression equation, the relationship between online course experience and the outcome weakened. To test this, the outcome was regressed onto online course experience and excitement/fear. The results showed that excitement/fear significantly predicted our outcome ( $\beta = -.371$ ;  $p < .001$ ). In addition, the relationship between experience and the outcome became non-significant ( $\beta = -.025$ ;  $p = .373$ ). Thus, the results indicated that excitement/fear mediated the relationship between online course experience and the extent to which student thought that our institution was pushing too much instruction online such that those students who had online course experience were more likely to be excited about the growth of online education and this excitement, in turn, was negatively related to believing that our institution was pushing too much instruction online.

## Discussion

This study investigated students' attitudes by considering how emotion influenced their perceptions of their online learning experiences. More specifically, the research question asked "Do feelings of excitement and fear moderate and/or mediate the relationship between online learning experience and student opinions about the current state of online education, namely that institutions are pushing too much instruction online?"

Our moderation analyses demonstrated that the relationship between online course experiences and the extent to which students thought that our institution was pushing too much online instruction depended on fear/excitement. Specifically, this relationship was positive for those students who reported being more fearful than excited about the growth of online education and negative for those students who reported being more excited than fearful. Students who had online course experience and were fearful about the growth of online education were the most likely to think that our institution was pushing too much instruction online. This might be because they had already gained online course experience and might be pressured by the institution to take more online courses. Conversely, of the students who were excited about the growth of online education, students with online course experience were less likely to consider that our institution was pushing too much instruction online in comparison to students without online course experience. Furthermore, as a general group (without regard to online course experience), students who were fearful about the growth of online education were more likely to consider that our institution was pushing too much instruction online in comparison with students who were excited about the growth of online education. This was perhaps because being excited about online education predisposed students towards online education and they would not feel institutional pressure to take online courses.

In addition, our mediation analyses revealed that excitement/fear about the growth of online education mediated the relationship between online course experience and students' opinions that institutions were pushing too much instruction online. In other words, excitement/fear was a key explanatory variable in understanding why course experience was related to the tendency to think that one's institution was pushing too much instruction online. This finding has important practical value because emotions like excitement or fear can be modified but

students' past online course experience cannot. Administrators and faculty can, for example, help engender an excitement for online learning among all students, whether or not students have taken an online course. In addition, our findings also suggest that increased online course experiences may result in more excitement and a decreased sense of pressure to take online courses. However, further research is needed to confirm our findings and to better understand the relationship among online course experience, excitement/fear, and students' perception of the institutional pressure to take online courses.

In other words (and as demonstrated in Figure 1), of the students who were fearful about the growth of online education, students with online course experience were more likely to consider that their institutions were pushing too much instruction online in comparison to students without online course experience. The former might feel so because they had already gained online course experience and might feel pressurized by the institution to take more online courses. Furthermore, as a general group (without regard to online course experience), students who were fearful about the growth of online education were more likely to consider that their institutions were pushing too much instruction online in comparison with students who were excited about the growth of online education, the latter perhaps because they were already predisposed towards online education and would not feel institutional pressure to take online courses. And finally, the magnitude of opinion about institutions pushing too much instruction online was greater between students with online course experience who were more fearful and more excited in comparison with the same two groups of students without online course experience.

## Conclusion

Although our research begins to demonstrate how excitement/fear shapes student opinions about distance education, this study is not without its limitations. The standard limitations of single-source, correlational survey data certainly apply to this study – e.g., causal inferences cannot be made and common method bias may explain some of the relationships. In addition, although we were able to demonstrate that students who had online course experience and were fearful about the growth of online education were the most likely to think that their institution was pushing too much instruction online, there are other factors that can affect these negative opinions. For example, the exact nature of the online course experience (e.g., Was it an elective or required course? How much online teaching experience did the instructor have? What kinds of interactions did the students have with peers?) and other affective reactions (e.g., anger, cynicism) may play a role in these opinions. Future research should explore these and other factors in order to paint a more complete picture of why and how students are affected by distance education.

Future research should also delve deeper into some of our results. Qualitative data testing our assumption that excitement about online education predisposes students to feeling less pressure to take online courses would be fruitful. In addition, further research should explore the relationship between online course experience and student opinions. In what cases are more experience associated with positive vs. negative opinions? Lastly, given that our results revealed the key role that excitement/fear plays in shaping student opinions, further research should continue down this avenue to not only confirm our findings, but to also explore how institutional efforts to engender excitement might be associated with more positive opinions about online learning.

Distance education is rapidly growing and it is important to understand how students' emotions, particularly excitement and fear, can affect their perception of the online learning experience. Findings of this study suggested that when students were fearful of the growth of

online learning, they felt that their institution was pushing too much online instruction. However, we also found that excitement/fear played a key role in shaping students opinions about online education and that increasing excitement might help create a more positive climate among students with regards to their opinions about online learning.

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